AMENDMENTS TO THE SPECIFICATION

Page 4, delete the first full paragraph and insert the following paragraph:

In the copper metallizing composition and the glass ceramic wiring board using the composition described in JP-A-11-53940, the glass ceramic porcelain and the copper metallizing composition are matched in the firing shrinkage behavior to reduce the protrusion of the via conductor from the glass ceramic wiring board surface, where the copper metallizing composition which is used for a via hole comprises from 2 to 20 parts by weight of an SiO_2-Al_2O_3-RO(R: alkaline earth metal)-B_2O_3 based glass ~~flit~~ frit having a glass transition point of 700 to 750°C per 100 parts by weight of the copper powder as the main component and the glass ceramic wiring board is obtained by using this copper metallizing composition and firing it simultaneously with a glass ceramic porcelain at a temperature of 700 to 1,000°C.

Page 5, delete the third full paragraph and insert the following paragraph:

In the copper metallizing composition and the glass ceramic wiring board using the composition described in JP-A-11-16418, a copper paste having added thereto a glass ~~flit~~ frit having a softening point of 700 to 1,000°C is filled in a via hole and fired together with the glass ceramic porcelain at a temperature of 800 to 1,000°C, whereby the adhesive strength between the ceramic porcelain and the via conductor is enhanced to eliminate clearance and at the same time, the protrusion of via conductor is reduced.

Page 6, delete the third full paragraph and insert the following paragraph:

However, according to the copper metallizing composition and the glass ceramic wiring board disclosed in JP-A-11-53940, a glass ~~flit~~ frit is added to the copper metallizing composition

and therefore, the glass readily comes up to the via conductor surface and remains there, giving rise to a problem that in the case of plating the via hole electrode surface and forming a wiring circuit thereon, the plating treatment becomes difficult.

Page 9, delete the third full paragraph and insert the following paragraph:

As an additive for this purpose, glass ~~flit~~ frit is conventionally known. At a temperature higher than the softening point, the glass ~~flit~~ frit is powder and provides an effect of inhibiting the sintering of via conductor, whereas at a softening point or more, the glass ~~flit~~ frit is fluidized and provides an effect of accelerating the sintering of via conductor. However, since a large amount of glass ~~flit~~ frit must be added so as to retard the initiation of sintering of the via conductor, glass comes up to the via conductor surface after firing and remains there and this makes it difficult to apply a plating treatment.

Page 10, delete the first full paragraph and insert the following paragraph:

According to the copper paste of the first, a ceramic particle having an average particle size of 100 nm or less is added. This ceramic particle is uniformly dispersed around the copper powder, so that even by the addition in a small amount, the effect of inhibiting the sintering of via conductor can be brought out and at the same time, the via conductor can be rapidly sintered (densified) after the initiation of sintering and thereby suppressed from protruding. Furthermore, unlike the glass ~~flit~~ frit, the ceramic particle does not have fluidity and is contained in the dispersed state inside the via conductor, therefore, an inorganic matter mainly comprising a constituent portion (constituents) of additives such as glass ~~flit~~ frit does not come up to the via

conductor surface to inhibit the plating treatment and an excellent wiring board facilitated in the plating treatment can be obtained.

Page 13, delete the first full paragraph and insert the following paragraph:

Therefore, in the second aspect, an Fe_2O_3 particle is added in the copper paste, whereby ~~he~~ the wettability to the liquid phase component in the low-temperature firing porcelain material is enhanced without impairing the sinterability of copper metal and the airtightness at the interface between the via conductor and the ceramic layer is improved.

Page 18, delete the second full paragraph and insert the following paragraph:

The copper paste of the second aspect preferably comprises a ceramic particle having an average particle size of 100 nm or less, more preferably having 50 nm or less, still more preferably having 40 nm or less, and particularly preferably having 30 nm or less. This is because since a ceramic particle having an average particle size of 100 nm or less is added, the ceramic particle is uniformly dispersed in the periphery of copper powder and thereby the copper powder and the ceramic green sheet are approximated in the sintering temperature and sintering timing, as a result, the protrusion of via conductor from the top surface of the wiring board can be reduced. Furthermore, this ceramic particle has no fluidity unlike a glass ~~flit~~ frit and is contained in the dispersed state inside the via conductor, therefore, an inorganic matter inhibiting the plating treatment does not come up to the via conductor surface and a wiring board facilitated in the plating treatment is obtained.

Page 39, delete the third full paragraph and insert the following paragraph:

Comparative Examples 1-C and 1-D are copper pastes where a glass ~~flit~~ frit having the same composition as the glass powder added in the production of ceramic green sheet and having a particle size of 800 nm was added in an amount of 1.0 part by mass or 5.0 part by mass.

Page 39, delete the fourth full paragraph and insert the following paragraph:

Comparative Examples 2-B and 2-C are copper pastes where 1.0 part by mass or 3.0 parts by mass of a glass ~~flit~~ frit having a particle size of 2.5 nm and 0.5 parts by mass of SiO_2 particle having an average particle size of 12 nm were added per 100 parts by mass of the copper powder. The glass ~~flit~~ frit used here had the same composition as the glass powder contained in the green sheet.

Page 43, delete the first full paragraph and insert the following paragraph:

In Comparative Examples 1-C and 1-D, when compared with Examples 1-A to 1-F of the present invention, a glass ~~flit~~ frit is added and thereby the protrusion amount of via conductor can be reduced to the same level as those of Examples 1-C, 1-E and 1-F of the present invention, however, coming up of glass to the via conductor surface is generated and the plating treatment becomes difficult. Incidentally, in Comparative Examples 1-C and 1-D, when the via conductor surface was enlarged and observed by a microscope, many inorganic matters composed of glass in a size of about 15 μm came up to the surface.

Page 44, delete the second full paragraph and insert the following paragraph:

In Comparative Example 2-B, when compared with Examples 2-A and 2-B of the present invention, a glass ~~flit~~ frit was added to the copper paste in place of Fe_2O_3 particle, as a result,

coming up of glass to the via conductor surface was generated to impair the plating property on the via conductor surface and at the same time, the airtightness was deteriorated.

Page 55, delete the second full paragraph and insert the following paragraph:

The copper paste of the present invention preferably contains no glass ~~flit~~ frit, because if contained, the plating property of the via conductor is impaired, however, according to the pattern design of wiring board, a slight amount of glass may be contained to an extent of not impairing the soldering or plating property.